

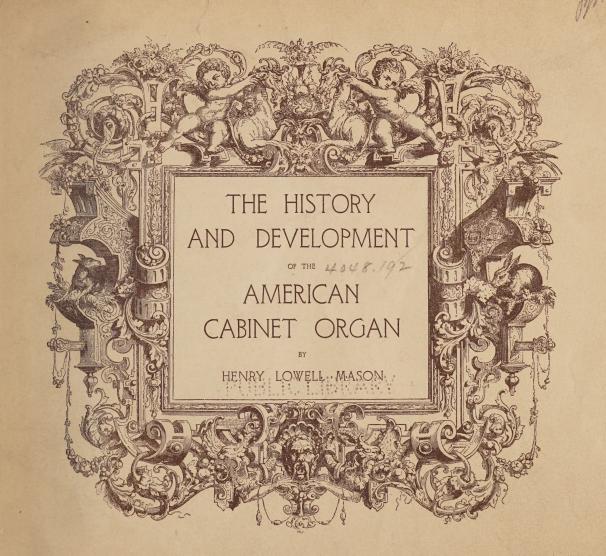
negative docustat copy in VF under Instruments



CAUTION

not write in this book or more noil. Penalties are important away of the Commonwealt Chapter 208, Section 85





Lewy Fowell Mason, May 14, 1903.

PUBLIC LIBRARY OF THE CITY OF BOSTON

THE HISTORY AND DEVELOPMENT THE AMERICAN CABINET ORGAN

By HENRY LOWELL MASON

4048.192

WITH ILLUSTRATIONS BY GERTRUDE CODMAN PARKER

HE Royal Museum, in Berlin, Germany, contains a collection of musical instruments which is of unique interest. In addition to such relics as a set of stringed instruments which once belonged to Beethoven, a flugel of Von Weber's, and so on, there are numerous groups or families, by which may be traced chronologically the different steps in the development of the various instruments. Here may be followed the history of the violin, wood wind instruments, the pianoforte, the organ, and others.

In charge of the Museum is Dr. Oskar Fleischer, a musician as well as a scientist, and it is a rare treat to follow him through this collection as he describes the different instruments historically and constructionally; while it is indeed impressive when he plays

the well tempered clavichord, or the clavicymbel, which belonged to Bach, music of Mozart, Pleyel, Meyerbeer, Von Weber, Mendelssohn, Liszt, on the instruments once used and owned by the master composers themselves.

It is the purpose here to trace the origin and to set forth the different periods in the history of the Reed Organ, and we will confine ourselves, so far as concerns the Royal Museum, to the group of instruments known as reed instruments played by means of key-board.

The history of the Organ proper, so-called, runs back to the time of the Greeks in the second century B. C., though, unfortunately, there is an accompanying vagueness inasmuch as the Greek term "Organon" was first applied to any musical instrument. The Pipes of Pan and a little later the more humble Bag Pipe (the only real national instrument by the way) and the Accordian are representatives of this family, but so far as the present writer has ascertained, the earliest forbear, so to speak, of

the American Cabinet Organ, which is the highest type of this class of instruments, was the Bibel-Regal of the seventeenth century, an excellent fac-simile of which is to be seen at the Berlin Museum.

This instrument employed beating reeds. It is altogether a small affair and



BIBEL-REGAL



quaint in appearance; having a range of three and one half octaves, with the last two sharps lacking; it is provided with two bellows, one for the upper two and one for the remaining octaves, connected with the wind-chest, so arranged as to appear like the covers of a book, from which fact the instrument takes the name of Bibel. The key-board may be enclosed within the bellows or covers, and the whole instrument easily carried under one's



GROSSES-BIBEL-REGAL

arm. One hand only of the player was free for the key-board, as the other hand was necessary to pump the bellows. Bibel-Regals enjoyed a certain popularity in their day, especially in the home, for at that time the only other instruments were the great pipe organs, and these were confined to churches and cathedrals.

As time went on improvements were introduced; Bibel-Regals were enlarged and to a greater or lesser extent perfected; they were finally provided with pedals connected with the bellows, so that the player might

supply the wind with his feet, thus having both hands free for the key-board. In the eighteenth century an instrument called the Grosses-Bibel-Regal, also shown in the Berlin collection, was introduced, though it was not until a considerable time later (in the early part of the nineteenth century) that any decided advance in construction took place.

Then it was that the Kleine-Physharmonica appeared; an instrument employing key-board and *free reeds*, so-called, and producing a tone similar to that of the mouth Harmonica, so well-known to our childhood but of no real musical value.



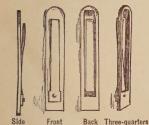
HARMONICA

The use of free reeds, instead of beating reeds, was introduced

here for the first time, thus marking a decided advance in construction, as never before had the free reed been employed in an instrument played by means of key-board.

The free reed in connection with this class of instruments played an important part in the experimenting of the closing years of the eighteenth and of the early years of the nineteenth centuries, and it may be well to consider in detail just what a free reed is.

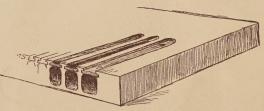
Known from an early time in China, but greatly developed in 1810 by a Frenchman named Grenié the free vibrating reed consists of a brass plate con-



FREE REED

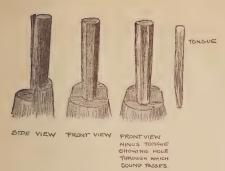
taining an oblong slit, with a thin, elastic tongue or vibrator made fast at

one end in such manner and so exactly fitting into the slit as to close it; but so fitting that it will bend to pressure of wind at the free end, passing either upward or downward without touching the sides or the free end. The distinctive difference between this form of reed and the beating reed used in Bibel-Regals, and universally used in pipe organs, is that in the latter the



FREE REED CHAMBER





BEATING REED

tongue covers the entire orifice, and in vibrating does not go downward through the opening. The advantages of the free over the beating reed are many, for instance, the tone is of a more agreeable quality; the free reed necessitates no pipe, thus demanding less space than the beating reed; the free reed is far less liable to go out of order, and it renders possible a most important property, namely, the power of expression.

For many years in the early part of the nineteenth century efforts were made to perfect the free reed in France and Germany, and later in England. They amounted to but little of absolute value, however,—the most notable being in the case of the "Orgue Expressif," invented in 1810 by Grenié; the "Kleine-Physharmonica" already alluded to, invented by Häekel; the "Parisian Melophone," about 1820, a curious instrument employing free reeds and bellows; and the English "Seraphone."

But it was not until 1840 that an instrument of real importance embodying the free reed was produced, and that was the Harmonium (from Harmony), unquestionably invented by Alexander Debaine, in Paris.

Debaine produced tones of superb timbre or quality by modifying the reed chambers, and he contrived to operate the various registers, or sets of reeds, from one key-board. He secured letters-patent for his invention, though unfortunately he patented too much, for he included in his claim the name Harmonium, thus debarring other makers of similar

instruments from using this name, and as a result they borrowed the name of the most dignified of all instruments, "Organ," thus applying this name to a class of

instruments which were not in reality organs at all.

What a striking example this is of the fact which etymology teaches us, namely, that the meaning of words is often changed, but that it seldom changes for the better. Many words, entirely harmless originally, carry a harmful significance in their secondary meaning. Archbishop Trench tells us in his admirable work on the study of words that "knave" originally meant no more than "lad" (as the German word "Knabe" means to-day) while other words once worthy have grown to be unworthy, — for instance, "orgies" were originally "religious ceremonies."

The word "dunce" to-day meaning a know-nothing is derived from the name of a most distinguished scholar, John Duns Scotus. For such is the irony of Fate. And so the men who appropriated the name "Organ" for their new production not only sinned against etymology, but really were not true to their own cause; for their instruments, though entirely worthy in themselves, were not truly organs—hence not entitled to the name. They were, however, conspicuously worthy of a new

name, a name of their own.



HARMONIUM (Of French Origin)

Debaine's invention has served more or less as the model of all successive instruments of the kind. In his Harmonium the bellows were on the force system so-called.

The main point of constructional difference between the French Harmoniums and similar instruments of America (and England), lies in the manner in which wind is applied to the reeds. The French Harmonium system is known as the Force Bellows System; while the system employed in all other instruments sib to the



Harmonium is known as the Exhaust System. In the former, or French Harmonium, the wind apparatus forces a current of air upwards through the reeds, producing as a result a tone somewhat harsh, strident, and rough, and characterized by a certain severity which is not altogether pleasing. In the Exhaust System, on the contrary, a vacuum is practically created in the so-called air chamber below the reeds by the exhausting power of the footpedals, and a current of air rushes down from above to fill the vacuum, and in its course passes through the reeds naturally and not in a forced manner, causing them to vibrate, consequently to sound, or, as it is technically termed, to speak. The tone thus produced is refined, melliflous and less reedy or metallic than that of the French instruments.

The principle of the exhaust system originated with the Alexandres of France, makers of Harmoniums. Their efforts in its application were but tentative, however, as the character of tone thus produced did not appeal to the French ear, and its perfection was brought about in America, where, because of its devotional character, the tone was welcomed and appreciated.

Reed instruments with key-boards were first constructed in the United States about the year 1818, and from almost the first they were and have been to the present time made with the exhaust bellows, though different makers have from time to time put upon the market instruments — Harmoniums — with the force system (notable among these is the Vocalion), though, as above stated, the exhaust system still remains the popular one in this country.

The first instrument to command general attention was the Melodeon, a free reed wind instrument with keyboard. Melodeons were at first made with the force system of bellows, similar to Harmoniums, but after a short

time the exhaust system was adopted. Its tone was produced through the vibration of reeds caused by a current of wind generated by a bellows; the bellows, which, by the way, was but a single one, was operated by a pedal similar in appearance to the pedal of a pianoforte, though as a matter of fact the Melodeon was supplied with two pedals, the left-hand one operating a swell, while the right-hand one connected with the bellows. The single bellows yielded insufficient wind to render a satisfactory volume of tone, and it was impossible furthermore to play with an evenness of tone, for in every movement of the foot in filling the bellows a break in the tone was occasioned. The single bellows was placed on top of the reed-board, thus leaving but little space for the reed chambers, and as a consequence the Melodeon never had more than two sets

MELODEON (Portable) of reeds.

Lack of variety in tonal effects was a marked characteristic of the Melodeon. And, in fact, what tone there was possessed a thin, reedy, nasal character, with but little volume, owing to the unscientific construction

of the reed cells, insufficient supply of wind, and want of proper voicing. In outer case the Melodeon resembled an old fashioned square pianoforte, and all of the action work or mechanical apparatus was of necessity contained in the limited space of the body of the case. Practically the only opportunity for variation of design or ornamentation was on the legs or trusses, the pedal harp and the music desk. Finally the swell in the Melodeon was altogether inadequate; it was unsubstantial, and it opened so suddenly on pressure from the foot that it was virtually more of a forte than a swell. As has been stated, Melodeons were at first made on the Harmonium system, but in 1846 one J. Carhart took out a patent for a single suction or exhaust bellows, and he was the first to apply this system to the Melodeon.



MELODEON (Piano Style)

Notwithstanding the many improvements which were made in the Melodeon, it still lacked in divers essentials, and was altogether inadequate as an instrument. Among the pioneers and largest manufacturers



of Melodeons up to 1850 was the George A. Prince Co. of Buffalo. This company introduced from time to time advances in construction, and among them was an instrument called the New Organ Melodeon.



ORGAN MELODEON

This instrument had two banks of keys, four sets of reeds, and one independent pedal set of one and one half octaves. However, it still had one bellows and fundamentally it was but a slight advance over the Melodeon. And so the manufacturers went floundering about, making but a modicum of headway, although it is true certain steps were gained now and againnotably in the years 1821, 1825 and 1835.

But it was not until the year 1850, or thereabouts, that any radical development took place. In that year a brilliant mechanic in the factory of the Prince Co., Emmons Hamlin by name, made certain discoveries which revolutionized and well-nigh perfected the art of voicing reeds; voicing being synonymous, practically, with tone coloring. That is to say, a given reed could now be made to imitate a clarinet, an oboe, a violin, or other

instrument, by voicing, while up to this time a prevalent cry against all these reed instruments had been that they were monotonous. Hamlin's discovery hushed this cry effectually forever; but as important as it was in itself there was felt the need of an improved construction in order that his discoveries might yield their finest results.

And so in 1855 there appeared a new instrument, Organ-Harmonium, invented by Mason & Hamlin, the Hamlin being this same Emmons Hamlin. In this instrument there were important and radical constructional points of superiority over anything which had preceded it. In the first place a double bellows was introduced,

insuring not only a round, full tone of much greater volume, but a capacity for varied expression. The two bellows, or double bellows, were operated by two blow pedals in alternation - by this means an evenness of tone, or an unbroken continuance of tone, was achieved. When it is remembered that, other things being equal, the volume of tone depends upon the amount of wind supplied, it will be seen that this improvement was of great importance. The first Organ-Harmonium ever made was manufactured by Mason & Hamlin in 1855.



FOOT BLOW PEDALS



ORGAN HARMONIUM

and organists, and its reputation became so general and the demand for it so large that other manufacturers adopted its name - applying it to instruments of totally different construction. The French Harmoniums, the Alexandre Organs, etc., employed an internal construction of an entirely different principle (as already pointed out), and this was also true to a greater or lesser extent with all other instruments known as "Organ-Harmoniums"—it being apparent that such instruments could not be constructed on the Mason & Hamlin method without infringement of patent rights. The instruments made by Mason & Hamlin were undeniably the most superior of their kind, and in order to individualize their instruments from inferior ones of other makers, it became necessary to coin a new name - and the name Cabinet Organ was introduced by Mason & Hamlin in 1861.

Thus the Organ-Harmonium became the Cabinet Organ. The word Cabinet was chosen naturally enough, for the instrument was now made with a case or cabinet, taking up no more floor space, however, than the Melodeen had done, but enclosing all the space taken. This was an important advance, for it thus became possible



and practicable to enlarge and develop the action, which could now be extended to occupy this enclosed space, and which was no longer limited to the small body of the instrument, as it had been in the Melodeon. It has been shown that the Cabinet Organ contained a double bellows, the right and left sections of which were operated

or blown by the feet of the player. Since the player's feet were occupied in blowing, the swell could not be operated by the left foot, as had been the case

in the Melodeon, and it became necessary to arrange a new swell.

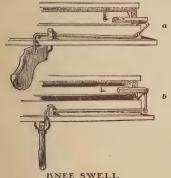
In accordance with the principle of necessity being the mother of invention, Mr. George Woods (a foreman in the Mason & Hamlin factory) introduced in 1862 the Automatic Bellows Swell - by which device the swell was self-acting, opening or closing without the aid of a separate pedal or stop operated by the player's foot or hand. It was effected by the natural attraction and expansion of the bellows, or receiver, as it became emptied of or filled with wind, in the ordinary process of playing. At the same time the Automatic Swell did not interfere with the usual method of operating the swell, viz., a foot pedal; and in the Cabinet Organ there was retained at the left hand lower corner of the instrument a swell foot-pedal.



CABINET ORGAN

However, in order to operate this latter, as may be plainly seen, it became necessary to remove the left foot from the blow pedal, thus interfering slightly with the evenness and continuity of blowing. An important improvement obviating this was later introduced (by Mason & Hamlin)

known as the Knee Swell, to-day universally used. Both the Automatic Swell and the Knee Swell operate so gradually and so evenly that they produce most perfect crescendos and diminuendos, an immense advantage over the ill-working swell of the Melodeon.



(a) Not in use (b) In use

From the above it is apparent that a vast and interesting variety of tonal effects, of expression and of power became possible in the Cabinet Organ. The instrument has been gradually developed and perfected, many makers contributing to this end, but from the time of the discoveries in the art of voicing by Emmons Hamlin on through the Melodeon, the Organ-Harmonium, the Cabinet Organ, and finally to the culmination as found in the Liszt Organ — really an instrument of its own class, sui generis — the greatest and vitalest part has been played by Mason & Hamlin. Their efforts have been unceasing and untiring, their determination unflinching, their ideals unshaken in their pursuit of perfecting the instrument. They more than any other have produced an instrument of artistic value, an instrument which by its virtues arrests the attention and compels the admiration of both artist and music lover.

We have seen at the Royal Museum of Musical Instruments at Berlin that the first and earliest member of this family of instruments was the Bibel-Regal - and we have endeavored to trace step by step the successive instruments History has borne to the family, and is it not with a certain undeniable as well as a national enthusiasm that we are assured by Dr. Fleischer, the Curator of the Museum, that the highest point—the Ultima Thule—of wind instruments played by means of key-board, has been achieved in the American Cabinet Organ.



























3 9999 05993 083 2

